MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018/2019

BJA2014 – JAVA PROGRAMMING INTERMEDIATE

(All sections / Groups)

7 MARCH 2019
2.30 P.M. - 4.30 P.M.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 2 pages excluding cover page.
2. There are 4 questions. Answer ALL questions.
3. Please write all your answers in the Answer Booklet provided.

Question 1

You work as human resources staff in a Supermarket. You are asked to design an application that can enable the worker to check the supervisor names in each department. Write an application that

a. Stores at least FIVE (5) different department and supervisor names in a two-dimensional array. (10 Marks)
b. Enable user to enter the department name (such as "Marketing") using input dialog. (3 Marks)
c. Display the corresponding supervisor's name using message dialog. (10 Marks)
d. If the department does not exist, display an error message using message dialog. (2 Marks)

(Total 25 Marks)

Question 2

You are working in finance department in Multimedia University. You are asked to design a java application that declare and store student's details such as student ID number, name, and annual tuition fee. Write an application that

a. Create an abstract **Student** class for Multimedia University. The class contains fields for student ID number, name, and annual tuition. Include a constructor that requires parameters for the ID number and name. Include get and set methods for each field; the **setTuition()** method is abstract. (5 marks)

b. Create three **Student** subclasses named **UndergraduateStudent**, **GraduateStudent**, and **PreUniversityStudent**, each with a unique **setTuition()** method. Tuition for an **UndergraduateStudent** is $4,000 per semester, tuition for a **GraduateStudent** is $6,000 per semester, and tuition for a **PreUniversityStudent** is $2,000 per semester. (9 marks)

c. Creates an array of at least SIX (6) objects to demonstrate how the methods work for objects for each **Student** type. (11 Marks)

(Total 25 Marks)

Question 3

Depression cases keep on increasing among students in Multimedia University. You as Motivation Society members asked to motivate using a java application that show quotes in walkway. You will need to

a. Create a java application with a **JFrame** and at least FIVE (5) labels that contain funny or motivation quote. (7 Marks)
b. The **JFrame** initialized by first label. (7 Marks)
c. Every time the user clicks a **JButton**, remove previous label and add next label. (10 Marks)
d. When the user clicked the fifth time, the label will start from first label again. (1 Mark)

Continue...

(Total 25 Marks)

Question 4

a) In a link that is to run a Java Web Start application, which file is specified as the **a** tag's **href** attribute? (3 Marks)

b) Which MIME type must a Web server recognize in order for it to host Java Web Start applications? (3 Marks)

c) In an application's **JNLP** file, which two elements must be specified within the **resources** element? (3 Marks)

d) Which interface provides the ability to control how the Java Web Start application's resources are cached?

i. **BasicService**
ii. **DownloadService**
iii. **PersistenceService**
iv. **ExtendedService** (2 Marks)

e) True or False: Java Web Start applications run in a secure sandbox by default. (2 Marks)

f) True or False: If a Java Web Start application is running in a secure sandbox, JAR files for the application can reside on different servers. (2 Marks)

g) For a Java Web Start application to support operations outside of the secure sandbox, what must you do? Exercises (2 Marks)

h) Write the XML code you would add to a **JNLP** file in order to request that the application have complete access to the client system. (3 Marks)

i) For a Java Web Start application, you have two icons, **one.gif** and **two.gif**, in the **images** directory in a JAR file. Write the application code you would use to access these images. (5 Marks)

(Total 25 Marks)

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